

IMPROVING THE ADHESION BETWEEN RUBBER COMPONENTS

12/7/04  
5 This is a divisional application of United States Patent Application Serial No. 08/865,784, filed on May 30, 1997, *now U.S. Patent 6,646,054.*

Background of the Invention

10 In manufacturing certain rubber articles, it is necessary to adhere pre-cured rubber components to uncured (green) rubber components. For instance, in retreading tires, an uncured tread can be affixed to a previously cured tire carcass. On the other hand, a previously cured tread could be affixed to an uncured carcass to simplify the process of building a new  
15 tire. In still other cases, it is desirable to adhere two pre-cured rubber components together.

Attaining adequate adhesion between a pre-cured rubber component and an uncured rubber component frequently proves to be challenging. An even greater  
20 challenge is presented in cases where it is desired to affix two pre-cured rubber components together. In such cases, cements and surface activation are frequently used to promote better adhesion. For example, surface activation is usually performed by  
25 buffing the surface of the pre-cured rubber component. However, the level of adhesion that can be attained via surface activation and cements sometimes proves to be inadequate.

30 Summary of the Invention

This invention relates to a process for improving the adhesion between different rubber components in a rubber article, such as a tire, a hose or a belt. This technique can be used to improve the adhesion  
35 between two different pre-cured rubber components or